

CLAIMS

1. A light distribution control type illuminator, comprising: a light source for radiating light through electric discharge between opposing electrodes; a reflecting mirror for reflecting a flux of light that is radiated from the light source in order to control the angle of the flux of light; and a path changing mirror for changing the path of the flux of light whose divergence has been controlled by the reflecting mirror,

the light source being placed in a manner that makes an axis line connecting the electrodes of the light source, or other reference lines used to specify a posture of the light source, substantially coincide with a center line of the flux of light controlled by the reflecting mirror, the path changing mirror redirecting the controlled flux of light to a desired direction around the center line of the controlled flux of light.

2. The light distribution control type illuminator according to Claim 1 further comprising: a casing for housing the light source and the reflecting mirror which controls the angle of a flux of light emitted from the light source; and a path changing mirror container set on a controlled light flux path side of the casing to house the path changing mirror, the path changing mirror container being attached to the casing in a manner that allows the path changing mirror container to rotate about a travel direction axis line of the controlled flux of light.

3. The light distribution control type illuminator according to Claim 2 further comprising a holding means for holding the casing such that the casing can be positioned in a desired direction around a vertical axis line.

4. The light distribution control type illuminator according to any one of Claims 1 to 3 wherein the light source is a discharge lamp such as a metal halide lamp or a low pressure sodium lamp.

5. The light distribution control type illuminator according to any one of Claims 1 to 4 wherein the path changing mirror is a light reflector shaped like a flat plate or a curved plate and having, on at least one side, ridges that are shaped like an arc, an elliptical arc, or a sine curve in section and that are arranged side by side in contact with one another, the light reflector having on its reflecting face a transparent body portion that is composed of the ridges, or a flat or curved structure in which surfaces of the ridges have a light reflecting function.